INDEX TO VOLUME LXIII, 1959

POWER ENGINEERING

A star * denotes an illustrated article; H denotes an article which appeared in the Power Engineering Handbook. A Subject Index follows the Article Index, and, as a cross-reference, an Index to the Authors appears last

ARTICLE INDEX

A

Accounting — Accurate Budgets from Good Cost Data — Industrial Power Plant ... July *76
Accounting — Accurate Records Cut Operating Costs — Industrial Power Plant ... June *84
Accounting — Set Up Cost Data for Operating Economy — Industrial Power Plant ... Apr *68
Accounting — Use Cost Data for Departmental Charges — Industrial Power Plant ... May *84
Accuracy — How to Square Root to Four-Digit ... Feb H 100
Advances in Piping Design — Rochester Generating Station Features ... Apr *94
Aeration of Streams by Hydro-Turbine Proves Practical — Forced ... Dec *82
Aggregate From Molten Boiler Slag — New Process Makes Lightweight ... Mar *76
Air and Gas Flow Through Perforated Panels and Pipe — Finding ... Oct H *106
Air Compressors — How to Select and Maintain Your ... Oct *82
Air Compressors — What the Power Engineer Needs to Know about ... Sep *82
Air Heaters — Saving Time on Cleaning Tubular ... Mar H *88
Air? — Do Power Plants Pollute the ... May 100
Air — Guide to Requirements for Compressed ... May H *106
Air Heater Tubes — Fast Way to Test Tubular ... Mar H *88
Air-Loaded Regulators Cut Control System Cost ... Aug *94
Air Preheater Cuts Fuel Costs, Improves Processes in Industry — Package ... Jan *82
Air — Refrigeration Needs for Cooling and Dehumidifying ... Aug H *102
Alignment — How to Maintain Centrifugal Pumps ... Aug H *100
Alpena Power Reduces Maintenance, Cuts Outages With Silicones ... Mar *62
ALPR Provides Power and Heat ... Feb *44
Aluminum-Bronze Fights Pump Corrosion ... Feb 81
Aluminum Condenser Tubes Win Out At Wisconsin Electric Power ... June *74
Aluminum Conductors For EHV Lines — Large ... Apr *71
Aluminum Goes to Work In the Power Plant ... Oct *96
Aluminum — Underground Station Adds 750,000 kw Hydro Power for Canadian ... Feb *69
American Power Conference Looks Ahead To Great Power Field Future ... May *94
American Power Conference Opens March 31 ... Mar 77
American Standard? — What Is an ... June *99
Amine Solves Tough Corrosion Problem for Make-Up System — Filming ... Mar *75
Ammonia Condensers — Case of the Frozen ... Sep H 102
Analysis, Balancing Recording Turbine Vibration Components Eases Trouble ... July *63
Analysis — Measuring X-ray Diffraction Speeds Scale ... Jan *77
Anti-Lambda — And Now — The ... Oct 47
Arc — Mach-20 Wind Tunnel Powered By 1,000,000-Amp ... May 88
Aircair Process — Hot Cell Doors Altered With ... Dec *51
Ash Handling System — Tait Station Expands ... Apr *86
ASME Reports Power Field Progress ... Feb *91
Atlantic City Electric Designs For Steam System Flexibility ... July *61
Atomic Power Offered by Westinghouse — Guaranteed-Price ... Dec *52
Atomics Newsletter ... Jan 33; Mar 41; May 49; July *43; Sept 58; Nov 45
Atomics — Operation Sunrise ... Jan *33
Atomic Electric Plant — The Vapor Container for the Yankee ... Apr *52
Automatic Chemical Feeding Device — Here's Way to Arrange ... Dec H *92
Automatic Thermal Station — Louisiana Power Builds World's First Fully ... May *69
Automatic Water Treatment — How Yarmouth Gets Fully ... Jan *75
Automating Steam-Atomizing Burners — is practical, saves money ... Mar *66
Auto Plant — Good Planning Smooths Out Power Conversion in ... June *77
Auxiliary Sheave Saves V-Belt Wear ... Mar H *84
Avon Steam Plant — Fluid Coke Is Primary Fuel in New ... Aug *68

B

Balancing — Recording Turbine Vibration Components Eases Trouble Analysis ... July *63
Baseplate and Couplings — How to Maintain Centrifugal Pumps ... June H *102
Bearings — How to Maintain Centrifugal Pumps ... Apr H *100
Bearings in Auxiliaries — Overhead Sensors Protect ... Dec *84
Big Power Plants? — Who Builds The ... Oct *101
Big Waste Burning Plants Are A Source of Heat and Power — The ... Sep *96
Bio-Oxidation Combined in Waste Plant at Chemstrand — Combustion and ... Apr *80
Boiler Adds Capacity to Twenty-Year-Old Unit — Remodeling ... Nov *99
Boiler Bridges — How We Rebuilt Our ... Aug *95
Boiler? — Can Your Plant Benefit From a Multi-Fuel ... Mar 80
Boiler Control — And How to Cure Them — Headaches of Package ... Dec *69
Boiler Feed Pump Motor? — How Big A ... Feb *79
Boiler Feed Service — Watch Lube Oil Characteristics in ... Mar *78
Boiler? — How Do You Light Off a Cold ... Sep H *104
Boiler Port Gage Maintenance — Package Components Simplify ... July *68
Boiler Tube — Fast — How We Repaired a ... Oct H *108
Boiler-Water Tests — Streamlining ... July *67
Boilers — Cause, Effect and Remedies — Vanadium Corrosion in ... May *98
Boilers For Safety and Efficiency — How Detroit Schools Replace ... Apr *89
Boilers — larger units, thermal gains — Tomorrow's ... Jan *8-4
Boilers — Thermiatrics: Study of the Diseases Of High Temperature ... May *91
Boiler Slag — New Process Makes Lightweight Aggregate From Molten ... Mar *76
Boiler-Turbine Efficiencies — Relating Cost of Heat to ... Feb H *96
Breakers — Testing and Calibration of Circuit ... Jan H *92
Bridges — How We Rebuilt Our Boiler ... Aug *95
Britain Modernizes World's Largest Grid Control System ... Apr 88
British Nuclear Power — Hinkley Point — 500 Mw of ... Aug *44
Brushes — Improving a Simple Device for Beveling, Concaving ... May H 106
Brushes? — Need to Bevel Those Carbon ... July H 98
Budgets from Good Cost Data — Industrial Power Plant Accounting — Accurate ... July *76
Bunker Fires and PC Firing — Safety Hazards from ... Oct H *104
Bureau of Mines Comments on Underground Gasification ... Sep 95
Burners From Plugging Up When Switching From Gas to Oil — How to Keep Oil ... June H *106
Burners — is practical, saves money — Automating Steam-Atomising ... Mar *66
Butt Welding Conductors Cuts Cost ... June *83
Butterfly Valves — Power Engineers' Valve Manual ... Mar *53

C

Cabinet Top — Beefing Up the Electrical ... Nov H *106
Cable Supports Saves $187,500 at Portland — Using Ladders for ... Oct *79
Calculate Required Steam Quantity — Here's Rapid Way to ... June H *108
Calibration of Circuit Breakers — Testing and ... Jan H *92
Calories To Beat the Profit Squeeze — Exide Captures the ... Oct *98
Canadian Aluminum — Underground Station Adds 750,000 kw Hydro Power for ... Feb *69
Can Your Plant Benefit From a Multi-Fuel Boiler? ... Mar 80
Capacitor Switching By Remote Control ... Apr *73
Carbide Drill — Glass Drilling Made Easy With ... Sep H 102
Carbon Brushes? — Need to Bevel Those ... July H 98
Casings — How to Maintain Centrifugal Pumps ... May H *104
Cause, Effect and Remedies — Vanadium Corrosion in Boilers ... May *98
Cavitation Cause Feedwater System Vibration — Does ... Oct *9
Cells for Accurate Weight and Force Measurements — Try Hydraulic Load ... Mar *73
Cements Solve Many Kinds of Power Plant Insulating Problems — Versatile ... Feb H *98
Centrifugal Pumps-10 — Alignment — How to Maintain ... Aug H *100
Centrifugal Pumps — 8 Baseplate and Couplings — How to Maintain ... June H *102
Centrifugal Pumps — Complete Pump Inspection — How to Maintain ... July H *92
Centrifugal Pumps — How to Maintain — Casings ... May H *104
Centrifugal Pumps — How to Maintain — 5 Wearing Rings ... Mar H *82
Centrifugal Pumps — 6-Bearings — How to Maintain ... Apr H *100
Centrifugal Pump Shafts and Sleeves — Maintaining ... Jan H *90
Check Those Steam Collectors! — Don't Forget to ... Nov H *106
Chemical Feeding Device — Way to Arrange an Automatic ... Dec H *92
Chemstrand — Combustion and Bio-Oxidation Combined in Waste Plant at ... Apr *80
Chilled Water Circuit — Inexpensive Way to Put Water Treatment Into ... July H *98
Chincoteague Goes To Dual-Fuel Firing ... June *81
Circuit Breakers — Testing and Calibration of ... Jan H *92
Circuit — Inexpensive Way to Put Water Treatment Into Chilled Water ... July H *98
Circuits — How to Trouble-Shoot Control ... Sep H *106
Cleaning Tubular Air Heaters — Saving Time on ... Mar H *88
CO_2 Corrosion in Condensate Lines — Preventing ... Dec H 94
Coal-Burning Power Plants — Designing ... Aug *96
Coal Has Its Day in Congress ... Oct 84
Coke is Primary Fuel in New Avon Steam Plant — Fluid ... Aug *68
Cold Boiler? — How Do You Light Off a ... Sep H *104
Cold Storage, the Floor Must Be Right — For ... Nov *89
Collectors! — Don't Forget to Check Those Steam ... Nov H *106
Combustion and Bio-Oxidation Combined in Waste Plant at Chemstrand ... Apr *80
Commutator Bar Marking? — How Can You Cure and Prevent ... Mar H *86
Comparative Prices for Fuel in 1958 — Survey Shows ... June 100
Compressed Air — Guide to Requirements For ... May H *106
Compressors — How to Select and Maintain Your Air ... Oct *82
Compressors — Now: Gas Powered Free-Piston Engines For Refrigeration ... Aug 76
Compressors — What the Power Engineer Needs to Know about Air ... Sep *82
Components Simplify Boiler Port Gage Maintenance — Package ... July *68
Condensate Flash System Cuts Fuel

Bill 25 Per Cent at Delco-Remy . . . May *97
Condensate Lines — Corrosion by CO_2 in Steam . . . Nov H *102
Condensate Lines — Preventing CO_2 Corrosion in . . . Dec H 94
Condensation — How to Figure Highest Room Relative Humidity Without Glass . . . June H *106
Condenser Tubes Do — What Stainless . . . Dec *78
Condenser Tubes Win Out At Wisconsin Electric Power — Aluminum . . . June *74
Condensers — Case of the Frozen Ammonia . . . Sep H 102
Conditions — Select Heater Drain Pump For Operating . . . Aug *80
Conductors Cuts Cost — Butt Welding . . . June *83
Conductors For EHV Lines — Large Aluminum . . . Apr *71
Congress — Coal Has Its Day In . . . Oct 84
Conservation, Gains Surprising Benefits — Gillette Practices Heat . . . May *86
Conservation of Utilities — Exide Captures the Calories To Beat the Profit Squeeze . . . Oct *98
Conserving Our Fossil Fuel Resources — A Proposal To Assist in . . . Apr *54
Construction — Lift Slab Method Can Be Valuable Tool In Power Plant . . . Aug *88
Construction — What Eddystone Station Looks Like During . . . June *90
Container for the Yankee Atomic Electric Plant — The Vapor . . . Apr *52
Control Circuits — How to Trouble-Shoot . . . Sep H *106
Control of Demand for Inside Temperature Changes — How We Simplified . . . Nov H *104
Control System Cost — Air-Loaded Regulators Cut . . . Aug *94
Control System — Silicon Rectifiers Prove Reliability in Unique Switchgear . . . Feb *77
Controls — Test Set for Pneumatic . . . Oct H *108
Controls Work — Know How Your Turbine . . . Mar *70
Conversion in Auto Plant — Good Planning Smooths Out Power . . . June *77
Cooling and Dehumidifying Air — Refrigeration Needs for . . . Aug H *102
Cooling Practical — Freeze-Point Depressant Makes Year-Round Ebullient Diesel . . . Aug *75
Cooling Tower Make-Up Water — Richmond Uses Sewage Plant Effluent As . . . July *71
Corps of Engineers — Our Biggest Hydro Operator — Army's . . . Sep *70
Corrosion — Aluminum-Bronze Fights Pump . . . Feb 81
Corrosion by CO_2 in Steam Condensate Lines . . . Nov H *102
Corrosion in Boilers — Cause, Effect and Remedies — Vanadium . . . May *98
Corrosion in Condensate Lines — Preventing CO_2 . . . Dec H 94
Corrosion Problem for Make-Up System — Filming Amine Solves Tough . . . Mar *75
Cost — Air-Loaded Regulators Cut Control System . . . Aug *94
Cost Data For Departmental Charges — Industrial Power Plant Accounting: Use . . . May *84
Cost Data for Operating Economy — Industrial Power Plant Accounting: Set Up . . . Apr *68
Cost Data — Industrial Power Plant Accounting . . . Accurate Budgets from Good . . . July *76
Cost of Heat to Boiler-Turbine Efficiencies — Relating . . . Feb H *96
Costs — First U. S. Planetary Gear Installation Cuts Space Requirements and . . . July *79
Costs — Good Handling Fixtures Slash Diesel Maintenance . . . Apr *96
Costs, Improves Processes in Industry — Package Air Preheater Cuts Fuel . . . Jan *82
Coupling Guard and Spray Shield — Make Your Own . . . Sep H *102
Crankcase Explosion Relief Valve — New Diesel . . . Oct *92

D

D-C Power — Consider Silicon Rectifiers for General-Purpose . . . May *89
Dehumidifying Air — Refrigeration Needs for Cooling and . . . Aug H *102
Delco-Remy — Condensate Flash System Cuts Fuel Bill 25 Per Cent at . . . May *97
Department Sets High Record for Efficiency — This City-Owned Power . . . June *70
Departmental Charges — Industrial Power Plant Accounting Use Cost Data For . . . May *84
Design and Build Them — Electric Transmission Lines — How to . . . July *58
Design and Build Them — Electric Transmission Lines — How To . . . Sep *76
Design and Operation of the Big Incinerator Furnaces . . . Nov *96
Design — Good Heat Balance Makes for Adequate . . . Sep 88
Design Industrial Power Plants for Flexibility . . . Nov 100
Design Trends . . . to man's ingenuity, a challenge . . . Jan *S-2
Designing Coal-Burning Power Plants . . . Aug *96
Desilicizer Feedwater Process Aids Scovill . . . Aug *93
Detection — Listening to the Sound Speeds Fault . . . July *88
Developments in Power Piping . . . Jan *S-19
Diesel Backs Up Steam Plant — New . . . Oct *100
Diesel Cooling Practical — Freeze-Point Depressant Makes Year-Round Ebullient . . . Aug *75
Diesel-Crankcase Explosion Relief Valve — New . . . Oct *92
Diesel Engines . . . many improvements, more to come . . . Jan S-18
Diesel Maintenance Costs — Good Handling Fixtures Slash . . . Apr *96
Diesel Power for Peaking — Maine P S Installs 4200 Kw in . . . Nov *74
Differential — Nomogram for Determining Draft . . . May H *108
Diffraction Speeds Scale Analysis — Measuring X-ray . . . Jan *77
Disposal of Radioactive Wastes from Nuclear Power Plants . . . Feb 49
Disposal — Zimmermann Process Works Well for Sewage Sludge . . . Jan *88
Dollar Value of Insulation By This Simple Method — You Can Figure . . . Jan *72
Doors Altered With Arcair Process — Hot Cell . . . Dec *51
Draft Differential — Nomogram for Determining . . . May H *108
Drill for Power Plant Work — Handy . . . Sep H *102
Drill — Glass Drilling Made Easy With Carbide . . . Sep H 102
Drip! — Here's a Way to Prevent That Oil . . . July H *94
Drives Mean Steam Economy — Turbine . . . Feb *70
Dual-Fuel Firing — Chincoteague Goes To . . . June *81
Dust in Mud Drum While Cleaning Tubes — Settle . . . July H *98
Dynamometers — How to Measure with . . . July *80

E

Ebullient Diesel Cooling Practical — Freeze-Point Depressant Makes Year-Round . . . Aug *75
Economy For Steam and Water Use — How Hiram Walker Wins . . . May *72
Economy — Industrial Power Plant Accounting: Set Up Cost Data for Operating . . . Apr *68
Economy — Turbine Drives Mean Steam . . . Feb *70
Eddystone Station Looks Like During Construction — What . . . June *90
Efficiency — How Detroit Schools Replace Boilers For Safety and . . . Apr *89
Efficiency — This City-Owned Power Department Sets High Record for . . . June *70
Efficiencies — Relating Cost of Heat to Boiler-Turbine . . . Feb H *96
EHV Lines — Large Aluminum Conductors For . . . Apr *71
Electrical Cabinet Top — Beefing Up the . . . Nov H *106
Electric Transmission Lines — How to Design and Build Them . . . July *58
Electric Tranamission Lines — How to Design and Build Them . . . Aug *90
Electric Tranamission Lines — How To Design and Build Them . . . Sep *76
Electrical Projects Are Organized — Here's How the Big . . . Nov *86
Electrical Waste, Helps Correct Low Power Factors — Sub-metering Locates . . . Apr *83
Electricity in Algeria — Largest Aircraft Propeller Provides . . . Jan *89
Elevator Doors! — Watch Out for Those . . . Dec H *96
Energy For Process and Space Heat in the United States — Nuclear . . . June *56
Engineers — Our Biggest Hydro Operator — Army's Corps . . . Sep *70
Engines For Refrigeration Compressors — Now: Gas Powered Free-Piston . . . Aug 76
Engines . . . many improvements, more to come — Diesel . . . Jan S-18
England-France . . . A New Power Alliance . . . Oct 75
Erie Taconite — High-Temperature Hot-Water System Succeeds at . . . Nov *93
Evaporation of Water from Open Tanks — Estimate . . . July H *94
Exciters: How They Work with Synchronous Motors and Generators . . . May *70
Exide Captures the Calories To Beat the Profit Squeeze . . . Oct *98
Explosion Relief Valve — New Diesel-Crankcase . . . Oct *92

F

Fairless Works Burns Three Fuels Simultaneously . . . July 78
Feeding Device — Here's a Way to Arrange an Automatic Chemical . . . Dec H *92
Feedwater Process Aids Scovill — Desilicizer . . . Aug *93
Feedwater System Vibration? Does Cavitation Cause . . . Oct *93
Figure Dollar Value of Insulation By This Simple Method — You Can . . . Jan *72
Filming Amine Solves Tough Corrosion Problem for Make-Up System . . . Mar *75
Fire Protection? — How Good Is Your . . . Apr *91
Firing — Chincoteague Goes To Dual-Fuel . . . June *81
First U. S. Planetary Gear Installation Cuts Space Requirements and Costs . . . July *79
Fittings and Openings — How to Prepare and Maintain Handhole . . . Apr H *104
Fixtures Slash Diesel Maintenance Costs — Good Handling . . . Apr *96
Flash System Cuts Fuel Bill 25 Per Cent at Delco-Remy — Condensate . . . May *97
Flexibility — Atlantic City Electric Designs For Steam System . . . July *61
Flexibility — Design Industrial Power Plants for . . . Nov 100
Floor Must Be Right — For Cold Storage, the . . . Nov *89
Flowmeter Measures Fluids Directly in Pounds — New . . . Dec *75
Fluid Coke Is Primary Fuel in New Avon Steam Plant . . . Aug. *68
Fly Ash Handling — State Line Improves On . . . Feb *75
Forced Aeration of Streams by Hydro-Turbine Proves Practical . . . Dec *82
Force Measurements — Try Hydraulic Load Cells for Accurate Weight and . . . Mar *73
Four-Digit Accuracy — How to Square Root to . . . Feb H 100
Four Ways to Make Work Easier . . . Aug H *102
Free-Piston Engines For Refrigeration Compressors — Now: Gas Powered . . . Aug 76
Free-Piston Gasifiers in Production — Industrial . . . Feb 63
Freeze-Point Depressant Makes Year-Round Ebullient Diesel Cooling Practical . . . Aug *75
Frozen Ammonia Condensers — Case of the . . . Sep H 102
Fuel Bill 25 Per Cent at Delco-Remy — Condensate Flash System Cuts . . . May *97
Fuel Cells Dramatized at Allis-Chalmers Demonstration — Feasibility of . . . Dec *85
Fuel Costs, Improves Processes in Industry — Package Air Preheater Cuts . . . Jan *82
Fuel in New Avon Steam Plant — Fluid Coke Is Primary . . . Aug *68
Fuel in 1958 — Survey Shows Comparative Prices for . . . June 100
Fuel Oil Temperature — New Easy Way to Find Right . . . May *93
Fuel Resources — A Proposal To Assist in Conserving Our Fossil . . . Apr *54
Fuels Simultaneously — Fairless Works Burns Three . . . July 78
Furnaces — Design and Operation of the Big Incinerator . . . Nov *96
Fusion Research For Power — Thermonuclear . . . June *52
Future of Industrial Power Generation? — What Is the . . . Oct *72

G

Gage for Use on Oil Tanks — How to Make a Liquid Level . . . Nov H *106
Gage Maintenance — Package Components Simplify Boiler Port . . . July *68
Gas Flow Through Perforated Panels and Pipe — Finding Air and . . . Oct H *106
Gas Powered Free-Piston Engines For Refrigeration Compressors — Now: . . . Aug 76
Gas Turbine Cycle Provides Unique Performance — Water or Steam Injection in . . . June *93
Gas-Turbine-Steam-Turbine . . . Why and How We Built Plant Crisp . . . Nov *70
Gasification — Bureau of Mines Comments on Underground . . . Sep 95
Gasification . . . Is U. S. Second Best? — Underground . . . May *66
Gasifiers in Production — Industrial Free-Piston . . . Feb 63
Gas Turbines . . . versatility, economics point to a brilliant future . . . Jan *S-13
Gas Turbine Will Combine With Steam Unit for Base Loading — New Peaking . . . May *77
Gear Installation Cuts Space Requirements and Costs — First U. S. Planetary . . . July *79
Generation and Transmission . . . definite factors influence trends . . . Jan *S-7
Generation? — What Is the Future of Industrial Power . . . Oct *72
Generators and Steam-Driven Feed Pumps Feature Weaton Station — Oversize . . . Dec *73
Generators . . . bigger machines, cheaper power — Turbine . . . Jan *S-3
Generators By Rewinding With Silicones — Electric Utility Upgrades . . . Oct *91

Generators — Exciters: How They Work with Synchronous Motors and . . . May *70
GETR — The Physics of the . . . Dec *48
Gillette Practices Heat Conservation, Gains Surprising Benefits . . . May *86
Gland Packing Really Works — New Hydro . . . Apr *70
Glass Condensation — How to Figure Highest Room Relative Humidity Without . . . June H *106
Glass Drilling Made Easy With Carbide Drill . . . Sep H 102
Good Handling Fixtures Slash Diesel Maintenance Costs . . . Apr *96
Good Heat Balance Makes for Adequate Design . . . Sep 88
Good Planning Smooths Out Power Conversion in Auto Plant . . . June *77
Graphitization In H-P Steam Lines — Oak Ridge Reports on . . . Mar *68
Greasing Job! — Watch That Motor . . . Feb H 96
Grid Control System — Britain Modernizes World's Largest . . . Apr 88
Grinding Is Easy This Way — Portable . . . May *79
Ground Your Power Station Safely . . . Jan *85
Guaranteed-Price Atomic Power Offered by Westinghouse . . . Dec *52
Guard and Spray Shield — Make Your Own Coupling . . . Sep H *102
Guide to Requirements For Compressed Air . . . May H *106

H

Handhole Fittings and Openings — How to Prepare and Maintain . . . Apr H *104
Handhole Plug Leaks — Good Way to Stop . . . Jan *79
Heat and Power — The Big Waste Burning Plants Are A Source of . . . Sep *96
Heat Balance Makes for Adequate Design — Good . . . Sep 88
Heat Conservation, Gains Surprising Benefits — Gillette Practices . . . May *86
Heat in the United States — Nuclear Energy For Process and Space . . . June *56
Heat Tracing — New Approach to . . . Aug *77
Heat . . . Where Does It Stand Today? — This Business of Getting Power Direct from . . . July 73
Heater — Making a Direct Contact Steam Water . . . Mar H *88
Heat to Boiler-Turbine Efficiencies — Relating Cost of . . . Feb H *96
Heat Pumps . . . hold great promise in refrigeration and air conditioning Jan *S-10
High Temperature Boilers — Thermiatrics: Study of the Diseases Of . . . May *91
High-Temperature Hot-Water System Succeeds at Erie Taconite . . . Nov *93
Hinkley Point — 500 Mw of British Nuclear Power . . . Aug *44
Hiram Walker Wins Economy For Steam and Water Use — How . . . May *72
Home-Made Rig for Handling Insulating Oil . . . Feb H *100
Hot Cell Doors Altered With Arcair Process . . . Dec *51
Hot Channel Concept of Water Cooled Reactors — The . . . Oct *42
How Big A Boiler Feed Pump Motor? Feb *79
How Can You Cure and Prevent Commutator Bar Marking? . . . Mar H *86
How Detroit Schools Replace Boilers For Safety and Efficiency . . . Apr *89
How Do You Light Off a Cold Boiler? Sep H *104
How Good Is Your Fire Protection? . . Apr *91
How Many Volts to Kill You? . . . June 98
How the Big Electrical Projects Are Organized — Here's . . . Nov *86
How the U.S. Trains Military Nuclear Power Plant Operators . . . Mar *50
How to Choose and Use Your Power Plant Motors Properly . . . Aug *84
How to Choose and Use Your Power Plant Motors Properly . . . Sep *87
How to Choose and Use Your Power Plant Motors Properly . . . Oct *76
How to Figure Highest Room Relative Humidity Without Glass Condensation . . . June H *106
How to Keep Oil Burners From Plugging Up When Switching From Gas to Oil . . . June H *106
How to Maintain Centrifugal Pumps 10 — Alignment . . . Aug H *100
How to Maintain Centrifugal Pumps 8 — Baseplate and Couplings . . . June H *102
How to Maintain Centrifugal Pumps 7 — Casings . . . May H *104
How to Maintain Centrifugal Pumps 9 — Complete Pump Inspection . . July H *92
How to Maintain Centrifugal Pumps 5 — Wearing Rings . . . Mar H *82
How to Maintain Centrifugal Pumps 6 — Bearings . . . Apr H *100
How to Make a Liquid Level Gage for Use on Oil Tanks . . . Nov H *106
How to Prepare and Maintain Handhole Fittings and Openings . . . Apr H *104
How to Remove a Broken Stud . . . Nov H *106
How to Select and Apply Strainers . . . Aug *72
How to Select and Apply Strainers . . . Sep *92
How to Select and Maintain Your Air Compressors . . . Oct *82
How to Square Root to Four-Digit Accuracy . . . Feb H 100
How to Trouble-Shoot Control Circuits . . . Sep H *106
How We Rebuilt Our Boiler Bridges . . . Aug *95
How We Train Supervisors . . . Nov *90
H-P Steam Lines — Oak Ridge Reports on Graphitization In . . . Mar *68
Humidity Without Glass Condensation — How to Figure Highest Room Relative . . . June H *106
Hydro-Operator — Army's Corps of Engineers — Our Biggest . . . Sep *70
Hydro Power for Canadian Aluminum — Underground Station Adds 750,000 kw . . . Feb *69
Hydro Power . . . if it's big, it's practical . . . Jan *S-6
Hydro-Power Work — West Germany Makes Pumped Storage . . . May *80
Hyperbolic Towers Deserve Study . . . June *96

I

Ice Plant . . . What Dunnit? — Trouble in the . . . July H *96
Impeller! — Take Care of That . . . Feb H *94
Improving a Simple Device for Beveling, Concaving Brushers . . . May H 106
Incinerator Furnaces — Design and Operation of the Big . . . Nov *96
Industrial Free-Piston Gasifiers in Production . . . Feb 63
Industrial Power Generation? — What Is the Future of . . . Oct *72
Industrial Power — Payback . . . Its Importance to . . . Jan 74
Industrial Power Plant Accounting Set Up Cost Data for Operating Economy . . . Apr *68
Industrial Power Plant Accounting Use Cost Data For Departmental Charges . . . May *84
Industrial Power Plant Accounting Accurate Records Cut Operating Costs . . . June *84
Industrial Power Plant Accounting — Accurate Budgets from Good Cost Data . . . July *76
Industrial Power Plants for Flexibility — Design . . . Nov 100
Industrial Turbine — Plan Ahead for Your Next . . . Aug 87
Industry — Package Air Preheater Cuts Fuel Costs, Improves Processes in . . . Jan *82
Inflatable Metal Tubing Comes to Town . . . Sep *100
Injection in Gas Turbine Cycle Provides Unique Performance — Water or Steam . . . June *93
Instrumentation . . . systems engineering is the newest and least understood . . . Jan *S-9
Insulation By This Simple Method — You Can Figure Dollar Value of . . . Jan *72
Insulation Nets New Memphis Plant Big Savings — Standardized . . . Dec *86
Insulation Resistance — Testing and Repair for . . . May H *102
Insulating Oil — Home-Made Rig for Handling . . . Feb H *100
Insulating Problems — Versatile Cements Solve Many Kinds of Power Plant . . . Feb H *98

J and K

Japan's First Nuclear Power Station . Oct *45
Kilowatts From Ox-Power . . . Nov *81
Know How Your Turbine Controls Work . . . Mar *70
Kodak Park Makes Power From 20 MGD of Treated Waste . . . Nov *77
Kropp Forge's Power Department Meets a Complex Demand for Services . . . Sep *89

L

Ladders for Cable Supports Saves $187,500 at Portland — Using . . . Oct *79
Large Power Plant — It Takes a Lot of Pipe to Build A . . . July *86
Launch N. S. Savannah . . . Oct 44
Leaks — Good Way to Stop Handhole Plug . . . Jan *79
Leak in Steam Line Under Pressure — Unique Method of Stopping . . . Apr H *104
Lift Slab Method Can Be Valuable Tool in Power Plant Construction . . . Aug *88
Light Off a Cold Boiler? — How Do You . . . Sep H *104
Lightning Protection — The Approach Today . . . June 76
Lines — How to Design and Build Them — Electric Transmission . . . July *58
Lines — How to Design and Build Them — Electric Transmission . . . Aug *90
Lines — How To Design and Build Them — Electric Transmission . . . Sep *76
Liquid Level Gage for Use on Oil Tanks — How to Make a . . . Nov H *106
Listening to the Sound Speeds Fault Detection . . . July *88
Load Cells for Accurate Weight and Force Measurements — Try Hydraulic . . . Mar *73
Louisiana Power Builds World's First Fully Automatic Thermal Station . . May *69
Low-Temperature Process-Heat Reactor . . . Oct 78
Lube Oil Characteristics in Boiler Feed Service — Watch . . . Mar *78

M

Mach-20 Wind Tunnel Powered By 1,000,000-Amp Arc . . . May 88
Maine P S Installs 4200 Kw in Diesel Power for Peaking . . . Nov *74
Maintain Centrifugal Pumps — 8 Baseplate and Couplings — How to June H *102
Maintain Centrifugal Pumps — Complete Pump Inspection — How to . . July H *92
Maintaining Centrifugal Pump Shafts and Sleeves . . . Jan H *90
Maintenance Costs — Good Handling Fixtures Slash Diesel . . . Apr *96
Maintenance, Cuts Outages With Silicones — Alpena Power Reduces . . . Mar *62
Maintenance — Package Components Simplify Boiler Port Gage . . . July *68
Make-Up System — Filming Amine Solves Tough Corrosion Problem for Mar *75
Make-Up Water — Richmond Uses Sewage Plant Effluent As Cooling Tower . . . July *71
Making a Direct Contact Steam Water Heater . . . Mar H *88
Management . . . increased importance for employee relations — Power Plant . . . Jan *S-14
Manual . . . Butterfly Valves — Power Engineers' Valve . . . Mar *53
Manual . . . Valve Operators — Power Engineers' Valve . . . Jan *65
Materials Using Oxygen and Metallic Powder — New Power Tool Cuts All . . . Sep *74
Measure with Dynamometers — How to . . . July *80
Measuring X-ray Diffraction Speeds Scale Analysis . . . Jan *77
Measurements — Try Hydraulic Load Cells for Accurate Weight and Force . . . Mar *73
Measures Fluids Directly in Pounds — New Flowmeter . . . Dec *75
Mechanical Rectifiers — Operating Experience With . . . Mar *57
Memphis Plant Big Savings — Standardized Insulation Nets New . . . Dec *86
Memphis Turbine Repair Takes Only 34 Days, Shutdown to Startup . . . Sep *79
Metallic Powder — New Power Tool Cuts All Materials Using Oxygen and Sep *74
Metal Tubing Comes to Town — Inflatable . . . Sep *100
Military Nuclear Power Plant Operators — How the U. S. Trains . . . Mar *50
Modern? — Will Your New Power Plant Be Really . . . Mar *59
Money — Automating Steam-Atomizing Burners . . . is practical, saves . . . Mar *66
Motor Greasing Job! — Watch That . Feb H 96
Motor? — How Big A Boiler Feed Pump . . . Feb *79
Multi-Fuel Boiler? — Can Your Plant Benefit From a . . . Mar 80
Motors and Generators — Exciters: How They Work with Synchronous May *70
Motors Properly — How to Choose and Use Your Power Plant . . . Aug *84
Motors Properly — How to Choose and Use Your Power Plant . . . Sep *87
Motors Properly — How to Choose and Use Your Power Plant . . . Oct *76
Mud Drum While Cleaning Tubes — Settle Dust in . . . July H *98

N

N. S. Savannah — Launch . . . Oct 44
Need to Bevel Those Carbon Brushes? July H 98
New Approach to Heat Tracing . . . Aug *77
New Easy Way to Find Right Fuel Oil Temperature . . . May *93
New Hydro Gland Packing Really Works . . . Apr *70
New Peaking Gas Turbine Will Combine With Steam Unit for Base Loading . . . May *77
New Power Plant Be Really Modern? — Will Your . . . Mar *59
New Power Tool Cuts All Materials — Using Oxygen and Metallic Powder . . . Sep *74
New Process Makes Lightweight Aggregate From Molten Boiler Slag . . . Mar *76
New Static Relays Show Many Advantages . . . July *70
New Zealand Harnesses Subterranean Steam for 250,000 Electrical Kw . . . July *89
Nomogram for Determining Draft Differential . . . May H *108
Nuclear Energy For Process and Space Heat in the United States . . . June *56
Nuclear Literature — New . . . Feb 50
Nuclear Literature — New . . . Apr 58

Nuclear Literature — New ..... June 58
Nuclear Literature — New ..... Aug 50
Nuclear Literature — New ..... Oct 48
Nuclear Power . . . confidence grows in rapid attainment of economic production ..... Jan *S-15
Nuclear Power — Hinkley Point — 500 Mw of British ..... Aug *44
Nuclear Power Plant — What It Takes To Man a Major ..... Apr *76
Nuclear Power Plant Operators — How the U. S. Trains Military ..... Mar *50
Nuclear Power Plants — Disposal of Radioactive Wastes From ..... Feb 49
Nuclear Powar Station — Japan's First ..... Oct *45

O

Oak Ridge Reports on Graphitisation In H-P Steam Lines ..... Mar *68
Oil Burners From Plugging Up When Switching From Gas to Oil — How to Keep ..... June H *106
Oil Characteristics in Boiler Feed Service — Watch Lube ..... Mar *78
Oil Drip! — Here's a Way to Prevent That ..... July H *94
Oil — Home-Made Rig for Handling Insulating ..... Feb H *100
Oil Reclaiming Proves To Be Economical for This Power System .... Jan *70
Old Flywheel Converted to Timing-Belt Drive ..... Mar H *84
Openings — How to Prepare and Maintain Handhole Fittings and ... Apr H *104
Operate Your Valves the Easy Way — Another Power Tool ..... Oct *85
Operating Conditions — Select Heater Drain Pump For ..... Aug *80
Operating Costs — Industrial Power Plant Accounting: Accurate Records Cut ..... June *84
Operating Experience at Vallecitos ... Aug *48
Operating Experience With Mechanical Rectifiers ..... Mar *57
Operating Tips on Transformers ..... Dec *67
Operation of the Big Incinerator Furnaces — Design and ..... Nov *96
Operation Sunrise — ATOMICS ..... Jan *33
Operators — How the U. S. Trains Military Nuclear Power Plant ..... Mar *50
Organised — Here's How the Big Electrical Projects Are ..... Nov *86
Outages With Silicones — Alpena Power Reduces Maintenance, Cuts . Mar *62
Oz-Power — Kilowatts From ..... Nov *81
Oxygen and Metallic Powder — New Power Tool Cuts All Materials Using ..... Sep *74

P

Package Air Preheater Cuts Fuel Costs, Improves Processes in Industry ..... Jan *82
Package Boiler Control — and How to Cure Them — Headaches of ..... Dec *69
Package Components Simplify Boiler Port Gage Maintenance ..... July *68
Packing Really Works — New Hydro Gland ..... Apr *70
Panels and Pipe — Finding Air and Gas Flow Through Perforated ..... Oct H *106
Paper Mill — New Recovery Process Furnishes Steam Stops Pollution at Large ..... July *82
Pasco Packing's Power Story ..... Feb *86
P.A.T. Machine Can Produce Speech . Jan 89
Payback — Its Importance to Industrial Power ..... Jan 74
PC Firing — Safety Hazards from Bunker Fires and ..... Oct H *104
Peaking — Maine P S Installs 4200 Kw in Diesel Power for ..... Nov *74
Perforated Panels and Pipe — Finding Air and Gas Flow Through ..... Oct H *106
Performance — Water or Steam Injection in Gas Turbine Cycle Provides Unique ..... June *93
Physics of the GETR — The ..... Dec *48
Pipe — Finding Air and Gas Flow Through Perforated Panels and .... Oct H *106
Pipe to Build A Large Power Plant — It Takes a Lot of ..... July *86
Pipe Welds Today — Making Quality Dec *64
Piping Design — Rochester Generating Station Features Advances in .. Apr *94
Piping — Developments in Power ... Jan *S-19
Plan Ahead for Your Next Industrial Turbine ..... Aug 87
Plant Be Really Modern? — Will Your New ..... Mar *59
Plant Crisp — Why and How We Built ..... Nov *70
Plant Effluent As Cooling Tower Make-Up Water — Richmond Uses Sewage ..... July *70
Plant Motors Properly — How to Choose and Use Your Power ..... Aug *84
Plant Motors Properly — How to Choose and Use Your Power ..... Sep *87
Plant Motors Properly — How to Chose and Use Your Power ..... Oct *76
Plants Are A Source of Heat and Power — The Big Waste Burning .. Sep *96
Plants—Designing Coal-Burning Power ..... Aug *96
Plugging Up When Switching From Gas to Oil — How to Keep Oil Burners From ..... June H *106
Plug Leaks — Good Way to Stop Handhole ..... Jan *70
Plumb Bob Solves Tricky Sighting Problem — Upside Down ..... Apr H *102
Pneumatic Controls — Test Set for ... Oct H *108
Pollution at Large Paper Mill — New Recovery Process Furnishes Steam, Stops ..... July *82
Portable Grinding Is Easy This Way . May *70
Portland — Using Ladders for Cable Supports Saves $187,500 at ..... Oct *79
Power Alliance—England-France . . . A New ..... Oct 75
Power and Heat — ALPR Provides .. Feb *44
Power — Consider Silicon Rectifiers for General-Purpose D-C ..... May *89
Power Conversion in Auto Plant — Good Planning Smooths Out ..... June *77
Power Department Meets a Complex Demand for Services — Kropp Forge's ..... Sep *89
Power Department Sets High Record for Efficiency — This City-Owned . June *70
Power Direct from Heat . . . Where Does It Stand Today? — This Business of Getting ..... July 73
Power Engineer Needs to Know about Air Compressors — What the ..... Sep *82
Power Engineer — Tools for the ..... June *88
Power Engineer — Tools for the ..... July *84
Power Engineers' Valve Manual — Valve Operators ..... Jan *65
Power Engineers' Valve Manual — Diaphragm Valves ..... Feb *71
Power Engineers' Valve Manual — Butterfly Valves ..... Mar *53
Power Factors — Sub-metering Locates Electrical Waste, Helps Correct Low ..... Apr *83
Power Field Future — American Power Conference Looks Ahead To Great . May *94
Power Field Progress — ASME Reports ..... Feb *91
Power Generation? — What Is the Future of Industrial ..... Oct *72
Power Plant — Aluminum Goes to Work In the ..... Oct *96
Power Plant Be Really Modern? — Will Your New ..... May *75
Power Plant Construction — Lift Slab Method Can Be Valuable Tool in ..... Aug *88
Power Plant Insulating Problems — Versatile Cements Solve Many Kinds of ..... Feb H *98
Power Plant — It Takes a Lot of Pipe to Build A Large ..... July *86
Power Plant Management — increased importance for employee relations .. Jan *S-14
Power Plant Motors Properly — How to Choose and Use Your ..... Aug *84
Power Plant Motors Properly — How to Choose and Use Your ..... Sep *87
Power Plant Motors Properly — How to Choose and Use Your ..... Oct *76
Power Plant Operators — How the U. S. Trains Military Nuclear ..... Mar *50
Power Plants — Designing Coal-Burning ..... Aug *96
Power Plants Pollute the Air? — Do .. May 100
Power Plant — What It Takes To Man a Major Nuclear ..... Apr *76
Power Plants? — Who Builds The Big Oct *101
Power Plant Work — Handy Drill for. Sep H *102
Power Station — Japan's First Nuclear ..... Oct *45
Power Station Safely — Ground Your Jan *85
Power Story — Pasco Packing's ..... Feb *86
Power System — Oil Reclaiming Proves To Be Economical for This .. Jan *70
Power — The Big Waste Burning Plants Are A Source of Heat and ... Sep *96
Power Tool, Another — Stud Welding Cuts Construction Costs for New Mexico Public Service ..... Nov *82
Power Tool, Another — Operate Your Valves the Easy Way ..... Oct *85
Preheater Cuts Fuel Costs, Improves Processes in Industry — Package Air ..... Jan *82
Prevent That Oil Drip! — Here's a Way to ..... July H *94
Prices for Fuel in 1958 — Survey Shows Comparative ..... June 100
Process and Space Heat in the United States — Nuclear Energy For ..... June *56
Process Furnishes Steam, Stops Pollution at Large Paper Mill — New Recovery ..... July *82
Process-Heat Reactor — Low-Temperature ..... Oct 78
Process Waste — Staley Saves Water, Cuts ..... Feb *88
Process Works Well for Sewage Sludge Disposal — Zimmermann ... Jan *88
Projects Are Organized — Here's How the Big Electrical ..... Nov *86
Propeller Provides Electricity in Algeria — Largest Aircraft ..... Jan *89
Proposal To Assist in Conserving Our Fossil Fuel Resources ..... Apr *54
Protect Bearings in Auxiliaries — Overhead Sensors ..... Dec *84
Protection? — How Good Is Your Fire ..... Apr *91
Protection — The Approach Today — Lightning ..... June 76
Pump For Operating Conditions — Select Heater Drain ..... Aug *80
Pumped Storage Hydro Power Work — West Germany Makes ..... May *80
Pumps 10 — Alignment — How to Maintain Centrifugal ..... Aug H *100
Pump Shafts and Sleeves — Maintaining Centrifugal ..... Jan H *90
Pump Corrosion — Aluminum-Bronze Fights ..... Feb 81
Pumps — How to Maintain Centrifugal — 5 — Wearing Rings ..... Mar H *82
Pumps 6 Bearings — How to Maintain Centrifugal ..... Apr H *100
Pumps 7 Casings — How to Maintain Centrifugal ..... May H *104
Pumps 8 — Baseplate and Couplings — How to Maintain Centrifugal ... June H *102
Pumps 9 Complete Pump Inspection — How to Maintain Centrifugal ... July H *92
Pump Motor? — How Big A Boiler Feed ..... Feb *79
Pumps . . . hold great promise in refrigeration and air conditioning — Heat ..... Jan *S-10

R

Radioactive Wastes From Nuclear Power Plants — Disposal of ..... Feb 49
Reactor — Low-Temperature Process-Heat ..... Oct 78
Reactors — The Hot Channel Concept of Water Cooled ..... Oct *42
Record for Efficiency — This City-Owned Power Department Sets High ..... June *70
Recording Turbine Vibration Components Eases Trouble Analysis, Balancing ..... July *63
Records Cut Operating Costs — Industrial Power Plant Accounting: Accurate ..... June *84
Recovery Process Furnishes Steam, Stops Pollution at Large Paper Mill July *82
Rectifiers for General-Purpose D-C Power — Consider Silicon ..... May *89
Rectifiers — Operating Experience With Mechanical ..... Mar *57
Rectifiers Prove Reliability in Unique Switchgear Control System — Silicon ..... Feb *77
Refrigeration Compressors — Now: Gas Powered Free-Piston Engines For ..... Aug 76
Refrigeration Needs for Cooling and Dehumidifying Air ..... Aug H *102
Regulators Cut Control System Cost — Air-Loaded ..... Aug *94
Relays Show Many Advantages — New Static ..... July *70
Reliability in Unique Switchgear Control System — Silicon Rectifiers Prove ..... Feb *77
Remodeling Boiler Adds Capacity to Twenty-Year-Old Unit ..... Nov *99
Remote Control — Capacitor Switching By ..... Apr *73
Remove a Broken Stud — How to ... Nov H *106
Repair for Insulation Resistance — Testing and ..... May H *102
Repair Takes Only 34 Days, Shutdown to Startup — Memphis Turbine ..... Sep *79
Repaired a Boiler Tube — Fast — How We ..... Oct H *108
Research For Power — Thermonuclear Fusion ..... June *52
Resistance — Testing and Repair for Insulation ..... May H *102
Resources — A Proposal To Assist in Conserving Our Fossil Fuel ..... Apr *54
Rest Is Light, Strong — Shop-Made Steady ..... Sep H *106
Rewinding With Silicones — Electric Utility Upgrades Generators By ... Oct *91
Richmond Uses Sewage Plant Effluent As Cooling Tower Make-up Water. July *71
Rig for Handling Insulating Oil — Home-Made ..... Feb H *100
Riveted Shunt Connections — Here's an Easy Way to Do It — Check Those ..... Oct H *108
Rochester Generating Station Features Advances in Piping Design .. Apr *94

S

Safely — Ground Your Power Station Jan *85
Safety — All Out For Complete ..... Feb *84
Safety and Efficiency — How Detroit Schools Replace Boilers for ..... Apr *89
Safety Equipment — Finding the Flaws in Testing ..... Dec *80
Safety Hazards from Bunker Fires and PC Firing ..... Oct H *104
Savannah — Launch N. S. ..... Oct 44
Saving Time on Cleaning Tubular Air Heaters ..... Mar H *88
Scale Analysis — Measuring X-ray Diffraction Speeds ..... Jan *77
Scovill — Desilicizer Feedwater Process Aids ..... Aug *93
Scraper Rings — Design and Application ..... Dec *89
Select and Apply Strainers — How to ..... Aug *72

Select and Maintain Your Air Compressors — How to . . . Oct *82
Select Heater Drain Pump For Operating Conditions . . . Aug *80
Sensors Protect Bearings in Auxiliaries — Overhead . . . Dec *84
Set Up Cost Data for Operating Economy — Industrial Power Plant Accounting . . . Apr *68
Sewage Plant Effluent As Cooling Tower Make-Up Water — Richmond Uses . . . July *71
Sewage Sludge Disposal — Zimmermann Process Works Well for . . . Jan *88
Shafts and Sleeves — Maintaining Centrifugal Pump . . . Jan H *90
Sheave Saves V-Belt Wear — Auxiliary . . . Mar H *84
Shield — Make Your Own Coupling Guard and Spray . . . Sep H *102
Shop-Made Steady Rest Is Light, Strong . . . Sep H *106
Shop Tricks — Useful . . . Dec H *96
Shop Work Easier — Two Ways to Make . . . June H *108
Shunt Connections — Here's an Easy Way to Do It — Check Those Riveted . . . Oct H *108
Shutdown to Startup — Memphis Turbine Repair Takes Only 34 Days . . . Sep *79
Sighting Problem — Upside Down Plumb Bob Solves Tricky . . . Apr H *102
Silicon Rectifiers for General-Purpose D-C Power — Consider . . . May *89
Silicon Rectifiers Prove Reliability in Unique Switchgear Control System . . . Feb *77
Silicones — Alpena Power Reduces Maintenance, Cuts Outages With . . . Mar *62
Silicones — Electric Utility Upgrades Generators By Rewinding With . . . Oct *91
Simple Method — You Can Figure Dollar Value of Insulation By This . . . Jan *72
Simplified Control of Demand for Inside Temperature Changes — How We . . . Nov H *104
Site Selection! — Utilities Do Affect Plant . . . Apr 82
Skimmer Walls — TVA Tries . . . Aug *78
Slag — New Process Makes Lightweight Aggregate From Molten Bolier . . . Mar *76
Sludge Disposal — Zimmermann Process Works Well for Sewage . . . Jan *88
Sound Speeds Fault Detection — Listening to the . . . July *88
Space Heat in the United States — Nuclear Energy For Process and . . . June *56
Space Requirements and Costs — First U. S. Planetary Gear Installation Cuts . . . July *79
Spray Shield — Make Your Own Coupling Guard and . . . Sep H *102
Square Root to Four-Digit Accuracy — How to . . . Feb H 100
Stainless Condenser Tubes Do — What . . . Dec *78
Staley Saves Water, Cuts Process Waste . . . Feb *88
Standard? — What Is an American . . . June *99
Startup — Memphis Turbine Repair Takes Only 34 Days, Shutdown to . . . Sep *79
State Line Improves On Fly Ash Handling . . . Feb *75
Station — Louisiana Power Builds World's First Fully Automatic Thermal . . . May *69
Steady Rest Is Light, Strong — Shop-Made . . . Sep H *106
Steam and Water Use — How Hiram Walker Wins Economy For . . . May *72
Steam-Atomizing Burners — is practical, saves money — Automating . . . Mar *66
Steam Collectors! — Don't Forget to Check Those . . . Nov H *106
Steam Condensate Lines — Corrosion by CO_2 in . . . Nov H *102
Steam Economy — Turbine Drives Mean . . . Feb *70
Steam for 250,000 Electrical Kw — New Zealand Harnesses Subterranean . . . July *89
Steam Injection in Gas Turbine Cycle Provides Unique Performance — Water or . . . June *93
Steam Lines — Oak Ridge Reports on Graphitization In H-P . . . Mar *68
Steam Line Under Pressure — Unique Method of Stopping Leak in . . . Apr H *104
Steam Quantity — Here's Rapid Way to Calculate Required . . . June H *108
Steam Plant — Fluid Coke Is Primary Fuel in New Avon . . . Aug *68
Steam Plant — New Diesel Backs Up . . . Oct *100
Steam Stops Pollution at Large Paper Mill — New Recovery Process Furnishes . . . July *82
Steam System Flexibility — Atlantic City Electric Designs For . . . July *61
Steam Water Heater — Making A Direct Contact . . . Mar H *88
Steam Unit for Base Loading — New Peaking Gas Turbine Will Combine With . . . May *77
Strainers — How to Select and Apply . . . Aug *72
Strainers — How to Select and Apply . . . Sep *92
Streamlining Boiler-Water Tests . . . July *67
Stud — How to Remove a Broken . . . Nov H *106
Stud Welding Cuts Construction Costs for New Mexico Public Service . . . Nov *82
Sub-metering Locates Electrical Waste, Helps Correct Low Power Factors . . . Apr *83
Subterranean Steam for 250,000 Electrical Kw — New Zealand Harnesses . . . July *89
Supervisors — How We Train . . . Nov *90
Supports Saves $187,500 at Portland — Using Ladders for Cable . . . Oct *79
Survey Shows Comparative Prices for Fuel in 1958 . . . June 100
Switchgear Control System — Silicon Rectifiers Prove Reliability in Unique . . . Feb *77
Switching By Remote Control — Capacitor . . . Apr *73
Switching From Gas to Oil — How to Keep Oil Burners From Plugging Up When . . . June H *106
Synchronous Motors and Generators — Exciters: How They Work with . . . May *70
System — Britain Modernizes World's Largest Grid Control . . . Apr 88
System Cuts Fuel Bill 25 Per Cent at Delco-Remy — Condensate Flash . . . May *97
System Flexibility — Atlantic City Electric Designs for Steam . . . July *61
System — Oil Reclaiming Proves To Be Economical for This Power System . . . Jan *70
System — Tait Station Expands Ash Handling . . . Apr *86

T

Take Care of That Impeller! . . . Feb H *94
Tait Station Expands Ash Handling System . . . Apr *86
Tanks — Estimate Evaporation of Water from Open . . . July H *94
Temperature Changes — How We Simplified Control of Demand for Inside . . . Nov H *104
Temperature — New Easy Way to Find Right Fuel Oil . . . May *93
Test Set for Pneumatic Controls . . . Oct H *106
Test Tubular Air Heater Tubes — Fast Way to . . . Mar H *88
Testing and Calibration of Circuit Breakers . . . Jan H *92
Testing and Repair for Insulation Resistance . . . May H *102
Testing Safety Equipment — Finding the Flaws in . . . Dec *80
Tests — Streamlining Boiler-Water . . . July *67
Thermal Station — Louisiana Power Builds World's First Fully Automatic . . . May *69
Thermiatrics: Study of the Diseases Of High Temperature Boilers . . . May *91
Thermonoclear Fusion Research For Power . . . June *52
Thirty-four Days, Shutdown to Startup — Memphis Turbine Repair Takes Only . . . Sep *79
This Business of Getting Power Direct from Heat . . . Where Does It Stand Today? . . . July 73
This City-Owned Power Department Sets High Record for Efficiency . . . June *70
Timing-Belt Drive — Old Flywheel Converted to . . . Mar H *84
Tips on Transformers . . . Oct *88
To Man a Major Nuclear Power Plant — What It Takes . . . Apr *76
Tomorrow's Boilers — larger units, thermal gains . . . Jan *8-4
Tool Cuts All Materials Using Oxygen and Metallic Powder — New Power . . . Sep *74
Tool in Power Plant Construction — Lift Slab Method Can Be Valuable . . . Aug *88
Tools for the Power Engineer . . . June *88
Tools for the Power Engineer . . . July *84
Towers Deserve Study — Hyperbolic . . . June *96
Tracing — New Approach to Heat . . . Aug *77
Train Supervisors — How We . . . Nov *90
Transformers — Operating Tips on . . . Dec *67
Transformers — Tips on . . . Oct *88
Transmission . . . definite factors influence trends — Generation and . . . Jan *8-7
Transmission Lines — How to Design and Build Them — Electric . . . July *58
Transmission Lines — How to Design and Build Them — Electric . . . Aug *90
Transmission Lines — How To Design and Build Them — Electric . . . Sep *76
Transmission Tower Gets Wind Load Test — 260-Ft . . . Nov *92
Treated Waste — Kodak Park Makes Power From 20 MGD of . . . Nov *77
Treatment — How Yarmouth Gets Full Automatic Water . . . Jan *75
Treatment Into Chilled Water Circuit — Inexpensive Way to Put Water . . . July H *98
Trouble Analysis, Balancing — Recording Turbine Vibration Components Eases . . . July *63
Trouble in the Ice Plant . . . What Dunnit? . . . July H *96
Try Hydraulic Load Cells for Accurate Weight and Force Measurements . . . Mar *73
Tubes Do — What Stainless Condenser . . . Dec *78
Tubes — Fast Way to Test Tubular Air Heater . . . Mar H *88
Tubes — Settle Dust in Mud Drum While Cleaning . . . July H *98
Tubes Win Out At Wisconsin Electric Power — Aluminum Condenser . . . June *74
Tube — Fast — How We Repaired A Boiler . . . Oct H *108
Tubing Comes to Town — Inflatable Metal . . . Sep *100
Tubular Air Heaters — Saving Time on Cleaning . . . Mar H *88
Tubular Air Heater Tubes — Fast Way to Test . . . Mar H *88
Tunnel Powered By 1,000,000-Amp Arc — Mach-20 Wind . . . May 88
Turbine Controls Work — Know How Your . . . Mar *70
Turbine Drives Mean Steam Economy . . . Feb *70
Turbine Generators . . . bigger machines, cheaper power . . . Jan *8-3
Turbine — Plan Ahead for Your Next Industrial . . . Aug 87
Turbine Repair Takes Only 34 Days, Shutdown to Startup — Memphis . . . Sep *79
Turbine Vibration Components Eases Trouble Analysis, Balancing — Recording . . . July *63
Turbines for Tomorrow — What Will They Be Like? . . . Aug 74
TVA Tries Skimmer Walls . . . Aug *78
Two Ways to Make Shop Work Easier June H *108

U

Underground Gasification . . . Is U. S. Second Best? . . . May *66
Underground Gasification — Bureau of Mines Comments on . . . Sep 95
Underground Station Adds 750,000 kw Hydro Power for Canadian Aluminum . . . Feb *69
Upside-Down Plumb Bob Solves Tricky Sighting Problem . . . Apr H *102
Use Your Power Plant Motors Properly — How to Choose and . . . Aug *84
U. S. Trains Military Nuclear Power Plant Operators — How the . . . Mar *50
Utilities Do Affect Plant Site Selection! . . . Apr 82

V

Vallecitos — Operating Experience at . . . Aug *48
Value of Insulation By This Simple Method — You Can Figure Dollar . . . Jan *72
Valve Manual — Valve Operators — Power Engineers' . . . Jan *65
Valve Manual — Diaphragm Valves — Power Engineers' . . . Feb *71
Valve Manual — Butterfly Valves — Power Engineers' . . . Mar *53
Valve — New Diesel-Crankcase Explosion Relief . . . Oct *92
Valve Operators — Power Engineers' Valve Manual . . . Jan *65
Valves the Easy Way — Another Power Tool . . . Operate Your . . . Oct *85
Vanadium Corrosion in Boilers — Cause, Effect and Remedies . . . May *98
Vapor Container for the Yankee Atomic Electric Plant . . . Apr *52
V-Belt Wear — Auxiliary Sheave Saves . . . Mar H *84
Versatile Cements Solve Many Kinds of Power Plant Insulating Problems Feb H *98
Vibration Components Eases Trouble Analysis, Balancing — Recording Turbine . . . July *63
Vibration? — Does Cavitation Cause Feedwater System . . . Oct *93
Volts to Kill You? — How Many . . . June 98

W

Walls — TVA Tries Skimmer . . . Aug *78
Waste-Burning Plants Are a Source of Heat and Power . . . Sept *96
Waste Control . . . more cooling towers, spray ponds, condensers — Water and . . . Jan *8-12
Waste, Helps Correct Low Power Factors—Sub-metering Locates Electrical . . . Apr *83
Waste Plant at Chemstrand — Combustion and Bio-Oxidation Combined in . . . Apr *80
Waste — Staley Saves Water, Cuts Process . . . Feb *88
Wastes From Nuclear Power Plants — Disposal of Radioactive . . . Feb 49
Watch Lube Oil Characteristics in Boiler Feed Service . . . Mar *78
Watch That Motor Greasing Job! . . . Feb H 96
Water and Waste Control . . . more cooling towers, spray ponds, condensers . . . Jan *8-12
Water Cooled Reactors — The Hot Channel Concept of . . . Oct *42
Water, Cuts Process Waste — Staley Saves . . . Feb *88
Water from Open Tanks — Estimate Evaporation of . . . July H *94
Water Heater — Making a Direct Contact Steam . . . Mar H *88
Water or Steam Injection in Gas

Turbine Cycle Provides Unique Performance ... June *93
Water — Richmond Uses Sewage Plant Effluent As Cooling Tower Make-Up ... July *71
Water Treatment — How Yarmouth Gets Fully Automatic ... Jan *75
Water Treatment Into Chilled Water Circuit — Inexpensive Way to Put ... July H *98
Water Use — How Hiram Walker Wins Economy For Steam and ... May *72
Way to Stop Handhole Plug Leaks — Good ... Jan *79
Wearing Rings — How to Maintain Centrifugal Pumps ... Mar H *82
Weaton Station — Oversize Generators and Steam-Driven Feed Pumps Feature ... Dec *73
Weight and Force Measurements — Try Hydraulic Load Cells for Accurate ... Mar *73
West Germany Makes Pumped Storage Hydro Power Work ... May *81
What Eddystone Station Looks Like During Construction ... June *90
What Is an American Standard? ... June *99
What It Takes To Man a Major Nuclear Power Plant ... Apr *76
What the Power Engineer Needs to Know About Air Compressors ... Sep *82
Why and How We Built Plant Crisp ... Nov *70
Will Your New Power Plant Be Really Modern? ... Mar *59
Will Your New Power Plant Be Really Modern? ... May *75
Wind Load Test — 260-Ft Transmission Tower Gets ... Nov *92
Wind Tunnel Powered By 1,000,000-Amp Arc — Mach-20 ... May 88
Wisconsin Electric Power — Aluminum Condenser Tubes Win Out At ... June *74
Work Easier — Four Ways to Make ... Aug H *102
Work — Handy Drill for Power Plant ... Sep H *102
World's First Fully Automatic Thermal Station — Louisiana Power Builds ... May *69
Would It Work? ... Jan *69

X, Y and Z

X-ray Diffraction Speeds Scale Analysis — Measuring ... Jan *77
Yankee Atomic Electric Plant — The Vapor Container for the ... Apr *52
Yarmouth Gets Fully Automatic Water Treatment — How ... Jan *75
Zimmermann Process Works Well for Sewage Sludge Disposal ... Jan *88

SUBJECT INDEX, January to December 1959 — inclusive

Selected typical articles covering readers' day-to-day job problems

Atomics

Operation Sunrise ... Jan *33
Nuclear Power — confidence grows in the rapid attainment of economic production ... Jan *S-15
ALPR — A Small Nuclear Power Plant ... Feb 43
Argonne LPR Provides Power and Heat ... Feb *44
Radioactive Wastes From Nuclear Power Plants — Disposal of ... Feb 49
Nuclear Literature — New ... Feb 50
Cerenkov Radiation ... Mar 41
Why Nuclear Power? ... Apr 51
Yankee Atomic Electric Plant — The Vapor Container for the ... Apr *52
Conserving Our Fossil Fuel Resources — A Proposal to Assist in ... Apr *54
Nuclear Literature — New ... Apr 58
Globe of Sulfur ... May *49
C-Stellarator — Fabulous Contraption ... June 51
Thermonuclear Fusion Research for Power ... June *52
Nuclear Energy for Process and Space Heat in the United States ... June *56
Nuclear Literature, New ... June 58
Nuclear Reactors vs Steam Boilers ... July *43
Nuclear Superheat — The Next Step ... Aug 43
British Nuclear Power — Hinkley Point — 500 Mw of ... Aug *44
Experience at Vallecitos — Operating ... Aug *48
Nuclear Literature — New ... Aug 50
Reactor Safety ... Sep 53
Out of the Realm of Fantasy ... Oct 41
Hot Channel Concept of Water Cooled Reactors — The ... Oct *42
N. S. Savannah — Launch ... Oct 44
Japan's First Nuclear Power Station ... Oct *45
Anti-Lambda — And Now — The ... Oct 47
Nuclear Literature — New ... Oct 48
Process-Heat Reactor — Low-Temperature ... Oct 78
Tremendous Headache ... Nov 45
Pressure Suppression Containment ... Dec 47
GETR — The Physics of the ... Dec *48
Doors Altered With Arcair Process — Hot Cell ... Dec *51
Atomic Power Offered by Westinghouse — Guaranteed-Price ... Dec *52

Boilers and Boiler Room Problems

Boilers — larger units, thermal gains — Tomorrow's ... Jan *S-4
Package Air Preheater Cuts Fuel Costs, Improves Processes in Industry ... Jan *82
Multi-Fuel Boiler? — Can Your Plant Benefit From a ... Mar 80
Steam Water Heater — Making a Direct Contact ... Mar H *88
Replace Boilers for Safety and Efficiency — How Detroit Schools ... Apr *89
Thermiatries: Study of the Diseases of High Temperature Boilers ... May *91
Subterranean Steam for 250,000 Electrical Kw — New Zealand Harnesses ... July *89
Light-Off a Cold Boiler? — How Do You ... Sep H *104
Remodeling Boiler Adds Capacity to Twenty-Year-Old Unit ... Nov *99
Steam Collectors! — Don't Forget to Check Those ... Nov H *106
Insulation Nets New Memphis Plant Big Savings — Standardized ... Dec *86

Condensers

Aluminum Condenser Tubes Win Out at Wisconsin Electric Power ... June *74
Skimmer Walls — TVA Tries ... Aug *78
Condenser Tubes Do — What Stainless ... Dec *78

Cooling Towers

Hyperbolic Towers Deserve Study ... June *96

Electric Generators

Electrical Generation and Transmission — definite factors influence trends ... Jan *S-7
Wind-driven Generator — Largest Aircraft Propeller Provides Electricity in Algeria ... Jan *89
Exciters: How They Work With Synchronous Motors and Generators ... May *70
Wind Tunnel Powered by 1,000,000-Amp Arc — Mach-20 ... May 88
Silicon Rectifiers for General-Purpose D-C Power — Consider ... May *89
Insulation Resistance — Testing and Repair for ... May H *102
Power Direct from Heat . . . Where Does It Stand Today? — This Business of Getting ... July 73
Generators by Rewinding With Silicones — Electric Utility Upgrades ... Oct *91
Kilowatts From Ox-Power ... Nov *81
Generators and Steam-Driven Feed Pumps Feature Weaton Station — Oversize ... Dec *73
Generators: Feasibility of Fuel Cells Dramatized at Allis-Chalmers Demonstration ... Dec *85

Electric Motors and Switchgear

Power Station Safely — Ground Your ... Jan *85
Electrical Circuit Breakers — Testing and Calibration of ... Jan H *92
Boiler Feed Pump Motor? — How Big a ... Feb *79
Motor Greasing Job! — Watch That ... Feb H 96
Motors Properly — How to Choose and Use Your Power Plant ... Aug *84
Motors Properly — How to Choose and Use Your Power Plant ... Sep *87
Motors Properly — How to Choose and Use Your Power Plant ... Oct *76
Riveted Shunt Connections — Here's an Easy Way to Do It — Check Those ... Oct H *108

Electrical Transmission and Distribution

Electrical Generation and Transmission . . . definite factors influence trends ... Jan *S-7
Silicon Rectifiers Prove Reliability in Unique Switchgear Control System ... Feb *77
Mechanical Rectifiers — Operating Experience With ... Mar *57
Aluminum Conductors for EHV Lines — Large ... Apr *71
Capacitor Switching by Remote Control ... Apr *73
Electrical Sub-metering — Sub-metering Locates Electrical Waste, Helps Correct Low Power Factors ... Apr *83
Grid Control System — Britain Modernizes World's Largest ... Apr 88
Plumb Bob Solves Tricky Sighting Problem — Upside-Down ... Apr H *102
Lightning Protection — The Approach Today ... June 76
Power Conversion in Auto Plant — Good Planning Smooths Out ... June *77
Butt Welding Conductors Cuts Cost ... June *83
Electric Transmission Lines — How to Design and Build Them ... July *58
Static Relays Show Many Advantages — New ... July *70
Electric Transmission Lines — How to Design and Build Them ... Aug *90
Electric Transmission Lines — How to Design and Build Them ... Sep *76
Power Alliance — England-France . . . A New ... Oct 75
Cable Supports Saves $187,500 at Portland — Using Ladders for ... Oct *79
Transformers — Tips on ... Oct *88
Big Electrical Projects Are Organized — Here's How ... Nov *86
Transmission Tower Gets Wind Load Test — 260-Ft ... Nov *92
Transformers — Operating Tips on ... Dec *67

Fuel: Fuel, Ash Handling; Gas Handling

Fly Ash Handling — State Line Improves on ... Feb *75
Steam-Atomizing Burners . . . is practical, saves money — Automating ... Mar *66
Lightweight Aggregate From Molten Boiler Slag — New Process Makes ... Mar *76
Ash Handling System — Tait Station Expands ... Apr *86
Underground Gasification . . . Is U. S. Second Best? ... May *66
Vanadium Corrosion in Boilers — Cause, Effect and Remedies ... May *98
Do Power Plants Pollute the Air? ... May 100
Nomogram for Determining Draft Differential ... May H *108
Dual-Fuel Firing — Chincoteague Goes to ... June *81
Comparative Prices for Fuel in 1958 — Survey Shows ... June 100
Burns Three Fuels Simultaneously — Fairless Works ... July 78
Fluid Coke Is Primary Fuel in New Avon Steam Plant ... Aug *68
Underground Gasification — Bureau of Mines Comments on ... Sep 95
Coal Has Its Day in Congress ... Oct 84

Gas Turbines

Gas Turbines . . . versatility, economics point to a brilliant future ... Jan *S-13
Water or Steam Injection in Gas Turbine Cycle Provides Unique Performance ... June *93

Hydro Power

Hydro Power . . . if it's big, it's practical ... Jan *S-6
Underground Hydro Power — Station Adds 750000 Kw . . . for Canadian Aluminum ... Feb *68
Gland Packing Really Works — New Hydro ... Apr *70
Pumped Storage Hydro Power Work — West Germany Makes ... May *80
Biggest Hydro Operator — Army's Corps of Engineers — Our ... Sep *70

Instruments and Controls

Instrumentation . . . systems engineering is the newest and least understood ... Jan *S-9
Hydraulic Load Cells for Accurate Weight and Force Measurements — Try ... Mar *73
Automatic Thermal Station — Louisiana Power Builds World's First Fully ... May *69
Fuel Oil Temperature (Gage) — New Easy Way to Find Right ... May *93
Recording Turbine Vibration Components Eases Trouble Analysis, Balancing ... July *63
Dynamometers — How to Measure With ... July *80
Speeds Fault Detection — Listening to the Sound ... July *88
Air-Loaded Regulators Cut Control System Cost ... Aug *94
Test Set for Pneumatic Controls ... Oct H *108
Liquid Level Gage — How to Make a . . . for Use on Oil Tanks ... Nov H *106
Control — and How to Cure Them — Headaches of Package Boiler ... Dec *69
Flowmeter Measures Fluids Directly in Pounds — New ... Dec *75
Sensors Protect Bearings in Auxiliaries — Overhead ... Dec *84

Internal Combustion Engines

Diesel Engines . . . many improvements, more to come ... Jan *S-18
Free-Piston Gasifiers in Production — Industrial ... Feb 63
Diesel Maintenance Costs — Good Handling Fixtures Slash ... Apr *96
Peaking Gas Turbine Will Combine

With Steam Unit for Base Loading — New . . . May *77
Diesel Cooling Practical — Freeze-Point Depressant Makes Year-Round Ebullient . . . Aug *75
Free-Piston Engines for Refrigeration Compressors — Now: Gas-Powered . . . Aug 76
Diesel-Crankcase Explosion Relief Valve — New . . . Oct *92
Diesel Backs Up Steam Plant — New . . . Oct *100
Diesel Power for Peaking — Maine P. S. Installs 4200 Kw in . . . Nov *74

Lubrication

Oil Reclaiming Proves to Be Economical for This Power System . . . Jan *70
Insulating Oil — Home-Made Rig for Handling . . . Feb H *100
Lube Oil Characteristics in Boiler Feed Service — Watch . . . Mar *78

Management and Methods

Plant Design Trends . . . to man's ingenuity, a challenge . . . Jan *S-2
Power Plant Management . . . increased importance for employee relations . . . Jan *S-14
Industrial Power — Payback — Its Importance to . . . Jan 74
Parametric Artificial Talker Machine Can Produce Speech . . . Jan 89
Boiler-Turbine Efficiencies — Relating Cost of Heat to . . . Feb H *96
Square Root to Four-Digit Accuracy — How to . . . Feb H 100
(Organisation of) Nuclear Power Plant — What It Takes to Man a Major . . . Apr *76
Plant Site Selection! — Utilities Do Affect . . . Apr 82
What Is an American Standard? . . . June *99
Way to Calculate Required Steam Quantity — Here's Rapid . . . June H *108
Designing Coal-Burning Power Plants . . . Aug *96
Good Heat Balance Makes for Adequate Design . . . Sep 88
Aluminum . . . in the Power Plant — Goes to Work . . . Oct *96
Who Builds The Big Power Plants? . . . Oct *101
Air and Gas Flow Through Perforated Panels and Pipe — Finding . . . Oct H *106
Industrial Power Plants — Design . . . for Flexibility . . . Nov 100

Maintenance, Construction and Installation

Stop Handhole Plug Leaks — Good Way to . . . Jan *79
Insulating Problems — Versatile Cements Solve Many Kinds of Power Plant . . . Feb H *98
Timing-Belt Drive — Old Flywheel Converted to . . . Mar H *84
V-Belt Wear — Auxiliary Sheave Saves . . . Mar H *84
Commutator Bar Marking? — How Can You Cure and Prevent . . . Mar H *86
Cleaning Tubular Air Heaters — Saving Time on . . . Mar H *88
Test Tubular Air Heater Tubes — Fast Way to . . . Mar H *88
Maintenance With Silicones — Alpena Power Reduces . . . Cuts Outages . Mar *62
Maintain Handhole Fittings and Openings — How to Prepare and . . . Apr H *104
Stopping Leak in Steam Line Under Pressure — Unique Method of . . . Apr H *104
Portable Grinding Is Easy This Way . May *79
Device for Beveling, Concaving Brushes — Improving a Simple . . . May H 106
Oil Burners From Plugging Up When Switching From Gas to Oil — How to Keep . . . June H *106
Port Gage Maintenance — Package Components Simplify Boiler . . . July *68
Evaporation of Water From Open Tanks — Estimate . . . July H *94
Prevent That Oil Drip! — Here's a Way to . . . July H *94
Bevel Those Carbon Brushes? — Need to . . . July H 98
Settle Dust in Mud Drum While Cleaning Tubes . . . July H *98
Lift Slab Method Can Be Valuable Tool in Power Plant Construction . . Aug *88
Boiler Bridges — How We Rebuilt Our . . . Aug *95
New Power Tool Cuts All Materials — Using Oxygen and Metallic Powder. Sep *74
Memphis Turbine Repair Takes Only 34 Days, Shutdown to Startup . . . Sep *79
Trouble-Shoot Control Circuits — How to . . . Sep H *106
Repair Boiler Tube — Fast — How We . . . Oct H *108
Stud Welding Cuts Construction Costs for New Mexico Public Service . . . Nov *82
Electrical Cabinet Top — Beefing Up the . . . Nov H*106
Remove a Broken Stud — How to . . . Nov H*106
Elevator Doors! — Watch Out for Those . . . Dec H *96

Meetings and Conventions

American Power Conference Meets March 31 — April 2 . . . Feb 90
ASME Reports Power Field Progress . Feb *91
Power Show — 1958 New York . . . Feb *92
American Power Conference Opens March 31 . . . Mar 77
American Power Conference Looks Ahead to Great Power Field Future. May *94

Piping and Valves

Power Piping — Developments in . . . Jan *S-19
Valve Operators — Power Engineers' Valve Manual . . . Jan *65
Insulation By This Simple Method — You Can Figure Dollar Value of . . . Jan *72
Diaphragm Valves — Power Engineers' Valve Manual . . . Feb *71
Butterfly Valves — Power Engineers' Valve Manual . . . Mar *53
Graphitization in H-P Steam Lines — Oak Ridge Reports on . . . Mar *68
Advances in Piping Design — Rochester Generating Station Features . . . Apr *94
Pipe to Build a Large Power Plant — It Takes a Lot of . . . July *86
Strainers — How to Select and Apply. Aug *72
Heat Tracing — New Approach to . . . Aug *77
Strainers — How to Select and Apply. Sep *92
Inflatable Metal Tubing Comes to Town . . . Sep *100
Valves the Easy Way — Another Power Tool . . . Operate Your . . . Oct *85
Cavitation Cause Feedwater System Vibration? — Does . . . Oct *93
Welds Today — Making Quality Pipe Dec *64

Plant Descriptions

Pasco Packing's Power Story . . . Feb *86
New Power Plant Be Really Modern? — Will Your . . . Mar *59
New Power Plant Be Really Modern? — Will Your . . . May *75
Eddystone . . . During Construction — What . . . Station Looks Like . . June *90
Steam System Flexibility — Atlantic City Electric Designs for . . . July *61
Planetary Gear Installation Cuts Space Requirements and Costs — First U. S. . . . July *79
Gas-Turbine-Steam-Turbine Plant — Why and How We Built Plant Crisp Nov *70
High-Temperature Hot-Water System Succeeds at Erie Taconite . . . Nov *93

Power Engineering Fundamentals

Old Patents . . . Would It Work? . . . Jan *69
Old Patents . . . Horse power from dog power . . . if the dog is willing. Jan *69

Pumps and Compressors

Centrifugal Pump Shafts and Sleeves — Maintaining . . . Jan H *90
Pump Corrosion — Aluminum-Bronze Fights . . . Feb 81
Centrifugal Pumps . . . Impeller! — Take Care of That . . . Feb H *94
Centrifugal Pumps — How to Maintain — 5-Wearing Rings . . . Mar H *82
Centrifugal Pumps — How to Maintain — 6-Bearings . . . Apr H *100
Centrifugal Pumps — How to Maintain — 7-Casings . . . May H *104
Requirements for Compressed Air — Guide to . . . May H *106
Centrifugal Pumps — How to Maintain — 8-Baseplate and Couplings. June H *102
Centrifugal Pumps — How to Maintain — 9-Complete Pump Inspection . . . July H *92
Heater Drain Pump for Operating Conditions — Select . . . Aug *80
Centrifugal Pumps — How to Maintain — 10-Alignment . . . Aug H *100
Air Compressors — What the Power Engineer Needs to Know About . . . Sep *82
Air Compressors — How to Select and Maintain Your . . . Oct *82
Scraper Rings — Design and Application . . . Dec *89

Records and Costs

Industrial Power Plant Accounting: Set Up Cost Data for Operating Economy . . . Apr *68
Industrial Power Plant Accounting: Use Cost Data For Departmental Charges . . . May *84
Industrial Power Plant Accounting: Accurate Records Cut Operating Costs . . . June *84
Industrial Power Plant Accounting: Accurate Budgets From Good Cost Data . . . July *76

Refrigeration, Air Conditioning and Ventilating

Heat Pumps . . . hold great promise in refrigeration and air conditioning . . . Jan *S-10
Highest Room Relative Humidity Without Glass Condensation — How to Figure . . . June H *106
Trouble in the Ice Plant . . . What Dunnit? . . . July H *96
Cooling and Dehumidifying Air — Refrigeration Needs for . . . Aug H *102
Frozen Ammonia Condensers — Case of the . . . Sep H 102
Cold Storage Floors — For Cold Storage, the Floor Must Be Right . . . Nov *89
Control of Inside Temperature — How We Simplified . . . Demand for . . . Changes . . . Nov H *104

Safety

Safety — All Out for Complete . . . Feb *84
Fire Protection? — How Good Is Your . . . Apr *91
How Many Volts to Kill You? . . . June 98
Hazards from Bunker Fires and PC Firing — Safety . . . Oct H *104
Safety Equipment — Finding the Flaws in Testing . . . Dec *80

Shops and Shopwork

Tools for the Power Engineer . . . June *88
Make Shop Work Easier — Two Ways to . . . June H *108
Tools for the Power Engineer . . . July *84
Make Work Easier — Four Ways to . . Aug H *102
Carbide Drill — Glass Drilling Made Easy With . . . Sep H *102
Coupling Guard and Spray Shield — Make Your Own . . . Sep H *102
Handy Drill for Power Plant Work . . Sep H *102
Shop-Made Steady Rest Is Light, Strong . . . Sep H *106
Shop Tricks — Useful . . . Dec H *96

Steam Turbines

Turbine Generators . . . bigger machines, cheaper power . . . Jan *S-3
Steam Turbine Drives — Mean . . . Economy . . . Feb *70
Turbine Controls Work — Know How Your . . . Mar *70
Turbines for Tomorrow — What Will They Be Like? . . . Aug 74
Industrial Turbine — Plan Ahead for Your Next . . . Aug 87
Industrial Power Generation? — What Is the Future of . . . Oct *72

Training

Trains Military Nuclear Power Plant Operators — How the U. S. . . . Mar *50
Training — Big Pay-Off for Overhead . . . Apr *98
High Record for Efficiency — This City-Owned Power Department Sets . . . June *70
Power Department Meets a Complex Demand for Services — Kropp Forge's . . . Sep *89
Train Supervisors — How We . . . Nov *90

Water Procurement and Treatment

Water Treatment — How Yarmouth Gets Fully-Automatic . . . Jan *75
Scale Analysis — Measuring X-ray Diffraction Speeds . . . Jan *77
Filming Amine Solves Tough Corrosion Problem for Make-Up System . Mar *75
Boiler-Water Tests — Streamlining . . July *67
Water Treatment Into Chilled Water Circuit — Inexpensive Way to Put . July H *98
Desilicizer Feedwater Process Aids Scovill . . . Aug *93
Corrosion by CO_2 in Steam Condensate Lines . . . Nov H *102
Aeration of Streams by Hydro-Turbine Proves Practical — Forced . . . Dec *82
Chemical Feeding Device — Here's a Way to Arrange an Automatic . . . Dec H *92
Corrosion in Condensate Lines — Preventing CO_2 . . . Dec H 94

Water Recovery or Disposal

Water and Waste Control . . . more cooling towers, spray ponds, condensers . . . Jan *S-12
Sewage Sludge Disposal — Zimmermann Process Works Well for . . . Jan *88
Saves Water, Cuts Process Waste — Staley . . . Feb *88
Waste Plant at Chemstrand — Combustion and Bio-Oxidation Combined in . . . Apr *80
Conservation of Steam and Water — How Hiram Walker Wins Economy for Steam and Water Use . . . May *72
Heat Conservation, Gains Surprising Benefits — Gillette Practices . . . May *86
Condensate Flash System (Recovery) Cuts Fuel Bill 25 Per Cent at Delco-Remy . . . May *97
Cooling Tower Make-Up Water — Richmond Use Sewage Plant Effluent as . . . July *71

New Recovery Process Furnishes Steam, Stops Pollution at Large Paper Mill ... July *82
Waste Burning Plants Are a Source of Heat and Power — The Big ... Sep *96
Conservation–of utilities–Exide Captures the Calories to Beat the Profit Squeeze ... Oct *98
Power From 20 MGD of Treated Waste — Kodak Park Makes ... Nov *77
Incinerator Furnaces — Design and Operation of the Big ... Nov *96

INDEX TO AUTHORS

A

Anderson, Ralph M. ... Nov H *106
Armstrong, H. R. ... June 76
Arterburn, J. O. ... Dec *48

B

Baker, C. T. ... July H *96
Baker, C. T. ... Sep H 102
Balestracci, O. P. ... Apr *52
Ball, W. B. ... Dec *67
Becker, A. J. ... Oct *88
Becker, A. J. ... Dec *81
Bizzell, Robert J. ... Mar *66
Blanke, John H. D. ... Sep *96
Blanke, John H. D. ... Nov *96
Boruff, C. S. ... May *72
Brasher, L. J. ... Apr *96
Brazaitis, Abdon J. ... Mar *53
Brown, C. L. ... Jan *82
Buckshee, William ... Feb H *100
Buckshee, William ... Apr *70
Buckshee, William ... May *79
Buckshee, William ... July *84
Burch, R. L. ... Sep *74
Burns, W. C. ... Aug *92

C

Cable, J. A. ... Jan H *90
Cable, J. A. ... Feb H *94
Cable, J. A. ... Mar H *82
Cable, J. A. ... Apr H *100
Cable, J. A. ... May H *104
Cable, J. A. ... June H *102
Cable, J. A. ... July H *92
Cable, J. A. ... Aug H *100
Cain, B. M. ... Aug 74
Calder, R. A. ... Nov H *104
Callans, Thomas J. ... Feb H *98
Carr, Laurance ... Jan *65
Carson, Harold G. ... Apr *78
Chave, Charles T. ... Apr *52
Christie, A. G. ... Jan *S-4
Cole, John S. ... Apr *68
Cole, John S. ... May *84
Cole, John S. ... June *84
Cole, John S. ... July *76
Conant, A. R. ... Aug *75
Conrad, Jr. J. D. ... Mar *70
Constance, John D. ... May H *106
Constance, John D. ... June H *106
Constance, John D. ... July H *94
Constance, John D. ... Aug H *102
Constance, John D. ... Oct H *106
Courtney, E. F. ... Aug *68
Coutant, Jay G. ... June *93
Crocker, Sabin ... Jan *S-19
Crotty, Harold F. ... Apr *83
Crouse, Robert F. ... July *63
Curran, James M. ... July H *94
Curran, James M. ... Sep H *102
Curran, James M. ... Oct H *108
Curran, James M. ... Nov H *106

D

Davis, Calvin B. ... Jan *S-6
Davis, Edward M. ... Oct *79
DeBenedetti, H. B. ... Aug *68
DeLong, Arthur F. ... Oct *98
DeReus, M. E. ... Jan *72
Dillon, Ralph R. ... July *80
Drewry, M. K. ... Nov *99
Dritt, W. S. ... Mar *68
Durning, William C. ... Apr H *104

E

Earle, Chester R. ... Jan *S-1
Edwards, T. W. ... Aug *80
Elder, Rex A. ... Aug *78
Ellis, Jr., Milton H. ... Dec *76
Ellison, Kenneth G. ... May H *102
Eustance, Harry ... Nov *77

F

Farmer, F. H. ... Aug *68
Felton, John W. ... Feb 81
Fischer, P. U. ... Mar *57

G

Gale, P. N. ... July *67
Garay, Paul N. ... Mar *59
Garay, Paul N. ... May *75
Gardner, Vernon E. ... July H 98
Gardner, Vernon E. ... Oct H *108
Garrison, Frank E. ... Oct *91
Geiger, J. A. ... Aug *72
Geiger, J. A. ... Sep *92
Geiringer, Paul L. ... June *56
Gibb, John C. ... Jan S-18
Gienger, John A. ... Feb *77
Gillespie, C. M. ... Feb H 100
Goodfriend, Morton J. ... June *56
Gunnoe, Jr. G. H. ... Mar H *86
Gusler, Denard L. ... June *81
Guzman, Ramon M. ... Nov H *102
Guzman, Ramon M. ... Dec H 94

H

Hansen, E. G. ... Nov *93
Harris, Richard P. ... Oct H *108
Henniger, Joseph R. ... June *77
Hindenlang, A. W. ... Dec *83
Hodska, Nicholas S. ... May H *108
Hoffman, S. David ... June *99
Holmes, O'Neil ... July H *98
Hoppe, T. C. ... July *71
Horn, Robert S. ... Jan *85
Hoyt, Harland K. ... Apr *76

I

Itschner, Maj. Gen. E. C. ... Sep *70

J

Jeffries, Robert J. ... Jan *S-9
Jacobson, Fred B. ... Sep *89
Johnston, R. A. ... Jan *79

K

Kalman, John ... July H *98
Karassik, Igor J. ... Feb *79
Karassik, Igor J. ... Mar *78
Keeling, O. H. ... July *61
Kelly, Jr., John C. R. ... July 73
Kimball, E. E. ... May *86
King, John ... Sep H *102
Klein, Donald E. ... Dec *79
Kovats, Andre ... Oct *93
Kramer, Andrew W. ... Jan *S-15
Kramer, Andrew W. ... Feb 43
Kramer, Andrew W. ... Mar 41
Kramer, Andrew W. ... Apr 51
Kramer, Andrew W. ... May 49
Kramer, Andrew W. ... June 51
Kramer, Andrew W. ... July *43
Kramer, Andrew W. ... Aug 43
Kramer, Andrew W. ... Sep 53
Kramer, Andrew W. ... Oct 41
Kramer, Andrew W. ... Nov 45
Kreig, Edwin H. ... Jan *S-2
Kristy, Jr., O. M. ... Jan H *90
Kristy, Jr., O. M. ... Feb H *94
Kristy, Jr., O. M. ... Mar H *82
Kristy, Jr., O. M. ... Apr H *100
Kristy, Jr., O. M. ... May H *104
Kristy Jr, O. M. ... June H *102
Kristy, Jr., O. M. ... July H *92
Kristy, Jr., O. M. ... Aug H *100
Kuljian, Harry A. ... Apr *54

L

Laughingham, W. B. ... Nov H *106
Lauria, D. T. ... Apr *80
Lehman, E. R. ... Feb *84
L'Hote, John ... Apr *89
Libby, Steve ... July *89
Lichstein, Michael ... Apr H *102
Lichstein, Michael ... Sep *106
Linde, Leonard J. ... June *52
Luckenbach, Leonard J. ... Feb *75
Ludewig, Herman A. ... Aug *95
Lueck, Bernard F. ... Dec *70

M

Macduff, R. A. ... Apr *91
Mahoney, C. H. ... Mar *68
Mauterer, R. J. ... Feb *88
McConnell, J. E. ... Oct *72
McFarland, R. ... Feb *71
McWhorter, R. J. ... Dec *48
Mehuron, C. W. ... Mar H *88
Meister, Rudolf Dr.-Ing. ... May *80
Michal, Frank W. ... Nov *86
Miller, E. H. ... Aug 74
Moore, Edward R. ... Jan *S-7
Mylting, L. E. ... Apr *86

N

Naney, E. P. ... July *58
Naney, E. P. ... Aug *90
Naney, E. P. ... Sep *76
Neyer, R. D. ... July *68
Nicholls, W. J. ... Apr *71
Neureuther, G. C. ... May *72
Noll, Douglas E. ... May *91
Norris, R. S. ... May *98
Nunley, L. L. ... May *77

O

Oliver, George M. ... June *70
Oscarson, G. L. ... May *70
Osmond, M. E. ... Mar *75
Overstreet, W. L. ... May *89

P

Palen, Vern W. ... Jan *77
Phillips, George O. ... May *77
Pierson III, Theodore A. ... July *79
Pinnell, Jr., Ray A. ... Aug *88
Pollock, W. A. ... June *74
Potts, R. J. ... Aug *84
Potts, R. J. ... Sep *86
Potts, R. J. ... Oct *76
Prater, Troy A. ... Mar H *84
Puts, Thomas J. ... Jan *S-13

R

Renner, Mehl ... June *88
Reynolds, J. C. ... Feb *88
Richardson, Burl ... Mar H *88
Rodman, George E. ... Nov *90

S

Sandall, Gordon H. ... Mar *62
Savage, Norton ... Feb H *96
Schabtach, Carl ... Jan *S-3
Schweisheimer, Dr. W. ... June 98
Scott, Ralph H. ... Dec *70
Sinclair, W. Dan ... Nov *70
Smith, F. L. ... May *77
Stickney, C. K. ... Aug *93

T

Tate, Malcolm C. ... Mar *73
Thielsch, Helmut ... Dec *64

V

Van Ryselberge, J. F. ... June *96
Vigren, David D. ... July *86

W

Waddell, J. D. ... Nov *74
Wade, Irving L. ... Jan *S-14
Wagner, Vincent S. ... July *79
Walker, Robin ... Apr 88
Walter, J. W. ... Aug *93
Wasserman, Charles ... Apr *73
Watson, Kenneth S. ... Jan *S-12
Wayne, H. B. ... June H *108
Weiss, M. L. ... Dec *48
Welder, B. Q. ... Mar *75
Werden, Robert G. ... Jan *S-10
Wheelock, Jr., B. R. ... Apr *94
Widmer, H. ... Mar *57
Willer, Fred W. ... Jan *70
Willey, Charles H. ... June H *108
Willey, Charles H. ... Aug H *102
Willey, Charles H. ... Dec H *96
Williams, James M. ... Feb *86
Wolf, B. ... Dec *48
Wolfe, E. E. ... July *67
Woodruff, Everett B. ... Aug *96
Wray, William R. Major ... Mar *50

Z

Zeigler, A. G. ... Jan *75
Ziegelmann, F. E. ... May *97
Ziegelmann, F. E. ... June H *106
Ziegelmann, Frank E. ... Dec H *92
Ziemke, Paul C. ... Sep H 102
Ziemke, Paul C. ... Nov H *106
Ziemke, Paul C. ... Dec H *96